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10/775,694

02/11/2004

Dan Matlock

MATLOCK-001

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34111 7590 11/02/2007  
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EXAMINER

AMADIZ, RODNEY

ART UNIT

PAPER NUMBER

2629

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/775,694

Applicant(s)

MATLOCK ET AL.

Examiner

Rodney Amadiz

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/23/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 21-26, 28-35, 37, 39 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoch (U.S. Patent 6,492,963—hereinafter “Hoch”).

As to **Claim 21**, Hoch teaches a light emitting display apparatus for displaying an image as the display apparatus is rotated (*See Fig. 1*) comprising: a support (*Fig. 8, 800*) being rotatable about a center of rotation (*See Fig. 1*); a plurality of light emitting elements on said support and arranged in one or more generally parallel columns (*Fig. 1, 101 and Col. 3, lines 22-26*); a means for sensing the rotational position of said support about the center of rotation thereof and generating a signal (*Col. 2, line 59—Col. 3, line 21*); an image map of an image to be displayed (*Col. 3, lines 64-67*); a microcontroller attached to each of said plurality of light emitting elements (*Fig. 4A, 202*), said microcontroller receiving said signal and configured to illuminate one or more of said light emitting elements in accordance with said image map and said signal (*See Fig. 4A and Col. 2, lines 43-44, Col. 4. lines 20-38*), thereby displaying said image as said support is rotated about the center of rotation so as to be viewed by humans (*See Figs. 3A-3F*); and a power source connected to and providing electrical power to said microcontroller (*Fig. 4A, 201*).

As to **Claim 30**, Hoch teaches a light emitting display apparatus for displaying a stationary or animated image on a rotating object, such as, for example, a wheel of a vehicle, the light emitting display apparatus (**Fig. 1 and Col. 5, lines 10-15**) comprising: a support attachable to the rotating object so as to having the same center of rotation as the rotating object (**Fig. 1, 101 and Fig. 8, 800**); a plurality of light emitting elements on said support and arranged in one or more generally parallel columns (**Fig. 1, 101 and Col. 3, lines 22-26**); an image map of an image to be displayed (**Col. 3, lines 64-67**); a means for sensing the rotational position of said support about the center of rotation and generating a signal (**Col. 2, line 59—Col. 3, line 21**); a microcontroller attached to each of said plurality of light emitting elements (**Fig. 4A, 202**), said microcontroller receiving said signal and configured to illuminate one or more of said light emitting elements in accordance with said image map and said signal (**See Figs. 3A-3F and 4A and Col. 2, lines 43-44, Col. 4, lines 20-38**), thereby displaying said image as said support is rotated about the center of rotation so as to be viewed by humans (**See Figs. 3A-3F**); and a power source connected to and providing electrical power to said microcontroller (**Fig. 4A, 201**).

As to **Claim 40**, Hoch teaches a light emitting display apparatus for displaying a stationary or animated image on a rotating object, such as, for example, a wheel of a vehicle (**Fig. 1 and Col. 5, lines 10-15**), the light emitting display apparatus comprising: a support attachable to the rotating object so as to having the same center of rotation as the rotating object (**Fig. 1, 101 and Fig. 8, 800**); a plurality of light emitting elements on said support and arranged in one or more generally parallel columns (**Fig. 1, 101 and**

**Col. 3, lines 22-26); one or more image maps of an image to be displayed (Col. 3, lines 64-67), each image map including an array of plurality of columns (*inherent in order to produce an image such as a message*); a means for sensing the rotational position of said support about the center of rotation and generating a signal (Col. 2, line 59—Col. 3, line 21); a microcontroller attached to each of said plurality of light emitting elements (Fig. 4A, 202), said microcontroller receiving said signal and operating to select an image map and a column from said selected image map in accordance with said signal and configured to illuminate one or more of said light emitting elements in accordance the selected image map, the selected column and said signal (See Figs. 1, 3A-3F and 4A and Col. 2, lines 43-44, Col. 3, lines 15-21 and 64-67 and Col. 4. lines 20-38 and note that when producing an image, pattern or message, the microprocessor takes into consideration the speed of the wheel in order to activate the proper light(s) in the respective column(s)), thereby displaying said image as said support is rotated about the center of rotation so as to be viewed by humans (See Figs. 3A-3F); and a power source connected to and providing electrical power to said microcontroller (Fig. 4A, 201).**

As to Claims 22 and 31, Hoch teaches that said image map includes an array having a plurality of columns and wherein said microcontroller operates to select a column and illuminate one or more of said light emitting elements in accordance with the selected column (See Figs. 1 and 3A-3F and Col. 3, lines 15-21 and 64-67 and note that when producing an image, pattern or message, the microprocessor

***takes into consideration the speed of the wheel in order to activate the proper light(s) in the respective column(s)).***

As to Claims 23 and 32, Hoch teaches that said microcontroller determines the rotational frequency of said support from said signal and further selects said column in accordance with said rotational frequency (***See Figs. 1 and 3A-3F and Col. 3, lines 15-21 and 64-67 and note that when producing an image, pattern or message, the microprocessor takes into consideration the speed of the wheel in order to activate the proper light(s) in the respective column(s)).***

As to Claims 24 and 33, Hoch teaches a plurality of image maps each having an array of a plurality of columns; and wherein said microcontroller operates to select an image map from said plurality of image maps, select a column from said selected image map and illuminate one or more of said light emitting elements in accordance with the selected image map and the selected column (***See Figs. 1 and 3A-3F and Col. 3, lines 15-21 and 64-67 and note that when producing an image, pattern or message, the microprocessor takes into consideration the speed of the wheel in order to activate the proper light(s) in the respective column(s)).***

As to Claims 25 and 34, Hoch teaches that said microcontroller determines the rotational frequency of said support from said signal and further selects said image map and said column in accordance with said rotational frequency (***See Figs. 1 and 3A-3F and Col. 3, lines 15-21 and 64-67 and note that when producing an image, pattern or message, the microprocessor takes into consideration the speed of the wheel in order to activate the proper light(s) in the respective column(s)).***

As to **Claims 26 and 35**, Hoch teaches that said means for sensing the rotational movement of said support comprises a magnetic source (***Fig. 4A, 107***) stationary to said support and a magnetic-field sensor (***106***) rotating with said support.

As to **Claims 28 and 37**, Hoch teaches that said image to be displayed is an animated image (***Col. 3, lines 15-21***).

As to **Claims 29 and 39**, Hoch teaches that said microcontroller further operates to illuminate one or more of said light emitting elements to scale and steady said image as said support is rotated (***Col. 4, lines 20-38***).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch.

As to **Claim 38**, Hoch does not teach that the image is selected from a group consisting of a vehicle instrument display, an accelerometer and a power meter. However, the specification shows no apparent benefits for having an image of a vehicle instrument display, an accelerometer or a power meter. Therefore, having an animated image of a vehicle instrument, accelerometer or power meter is clearly a design choice based on the specific requirement of the claim. Furthermore, it would have been obvious to one of ordinary skill in the art to include any animated image, including that

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of any vehicle instrument display, an accelerometer or a power meter, into the rotational light emitting display apparatus taught by Hoch, since any animated image would provide an adequate visual illustration of a dynamic image.

5. Claims 27 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch in view of Gloodt et al. (USPGPUB 2003/0151924—hereinafter “Gloodt”).

As to **Claims 27 and 36**, Hoch teaches a coil (Fig. 4, 106 and Col. 3, lines 8-15). Hoch, however, fails to teach that said power source is derived from electrical current generated in the coil when passed by the magnetic source. Examiner cites Gloodt to teach that said power source is derived from electrical current generated in the coil when passed by the magnetic source (***Pg. 2, ¶ 0024***). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to replace the power supply taught by Hoch with the power supply taught by Gloodt in order to be more power and cost efficient; thereby never having to replace batteries.

#### ***Response to Arguments***

6. The Affidavit filed on July 23, 2007 under 37 CFR 1.131 is sufficient to overcome the Todorox and Reim references. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hoch and Gloodt.



***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

|              |                       |
|--------------|-----------------------|
| Capps et al. | U.S. Patent 5,791,966 |
| Reynolds     | U.S. Patent 5,903,224 |
| Crouch       | U.S. Patent 6,037,876 |
| Yu           | U.S. Patent 6,072,386 |
| Kowalewski   | USPGPUB 2002/0135541  |

***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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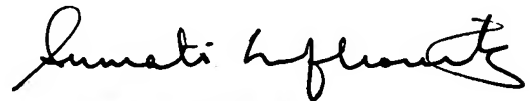
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R.A.

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10/29/07

Division 2629



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